



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,957	02/28/2005	Richard Hellberg	4147-104	3069

23117 7590 10/27/2006

NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER

CHOE, HENRY

ART UNIT PAPER NUMBER

2817

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,957	<b>Applicant(s)</b> HELLBERG ET AL.	
	<b>Examiner</b> Henry K. Choe	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 16-19, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 4-10, 12-15 and 20-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/28/05; 6/7/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 11, 16-19, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sigmon (Fig.1).

Regarding claims 1, 11 and 16, Sigmon (Fig. 1) discloses an amplifier circuit comprising a composite amplifier (Fig. 1) having a power amplifying stage consisting of an even number (4) of power amplifiers (14, 15, 22, 23) arranged into a plurality of Chireix pairs [(14, 15; 22, 23); It should be noted that the amplifiers 14, 15, 22 and 23 can be read as the claimed Chireix pairs since the quarter wavelengths 42, 20 and 44 transmission lines have the delay which corresponds to the phase shift] connected to a common load (RLOAD).

Regarding claims 2 and 17, Sigmon (Fig.1) further including means (40) for driving at least one Chireix pair (14, 15) by drive signals (outputs of 40) having amplitude dependent phase over at least a part of the dynamic range of the composite amplifier (Fig. 1).

Regarding claims 3, 18 and 19, Sigmon (Fig.1) further including means (40) for driving at least two Chireix pairs (14, 15; 22, 23) by drive signals (outputs of 40) having

Art Unit: 2817

amplitude dependent phase over at least a part of the dynamic range of the composite amplifier (Fig. 1).

Regarding claims 26 and 27, the limitations recited in claims are intended use of the invention.

***Allowable Subject Matter***

Claims 4-10, 12-15 and 20-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent numbers (7,064,606; 6,700,444) are the plurality of Chireix pairs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-

1760.

  
**HENRY CHOE**  
**PRIMARY EXAMINER**

#1177